Environment Canada Environnement Canada

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 (CEPA 1999)

Implementation Guidelines for Part 8 of the *Canadian Environmental Protection Act, 1999* – Environmental Emergency Plans

Environmental Emergencies Program
Environment Canada

September 2003

Canada

The National Library of Canada has catalogued this publication as follows:

Environmental Emergencies Program (Canada)

Implementation Guidelines for Part 8 of the *Canadian Environmental Protection Act, 1999* – Environmental Emergency Plans

Issued also in French under title: Lignes directrices pour la mise en application de la partie 8 de la *Loi canadienne sur la protection de l'environnement (1999)* – Plans d'urgence environnementale. Issued also on the Internet.

ISBN 0-662-33797-2
Cat. no. En40-619/2003E

1. Environmental law - Canada.
2. Pollution - Law and legislation - Canada.
3. Environmental protection - Canada.
4. Emergency management - Canada.
5. Environmental policy - Canada.
I. Canada. Environment Canada.
II. Title.

KE3619.E58 2003 344.71'046

© Her Majesty the Queen in Right of Canada (Environment Canada) 2003

Environment Canada Environnement Canada

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999 (CEPA 1999)

103-07026/

Environmental Emergency Plans

Implementation Guidelines for Part 8 of the *Canadian Environmental Protection Act, 1999* – Environmental Emergency Plans

Environmental Emergencies Program
Environment Canada

September 2003

Canada

TABLE OF CONTENTS

1.0 INTRODUCTION 2

2.0 SUMMARY OF CEPA 1999'S ENVIRONMENTAL EMERGENCY PLANNING PROVISIONS UNDER PART 8, SECTIONS 200 AND 199 4

2.1 Environmental Emergencies Authorities under CEPA 1999 Part 8 4

3.0 APPLICATION OF SECTION 200 8

3.1 Section 200 8
3.2 Requirements for Environmental Emergency Plans — CEPA 1999 Subsection 200(1) 8
3.3 Application of Provisions 12

4.0 ENVIRONMENTAL EMERGENCY REPORTING REQUIREMENTS — SECTION 201 13

5.0 APPLICATION OF SECTION 199 14

5.1 Section 199 14
5.2 Requirements for Environmental Emergency Plans — CEPA 1999 Subsection 199(1) 14
5.3 Emergency Management during Interim Periods 16
5.4 Extensions of Time — CEPA 1999 Subsection 199(3) 16
5.5 Application of Provisions 17

6.0 CONTENT OF AN ENVIRONMENTAL EMERGENCY PLAN 18

7.0 PUBLIC ACCESS TO SUBMITTED NOTICES AND DECLARATIONS 24

8.0 COMPLIANCE AND ENFORCEMENT 26

9.0 CONCLUSION 27

APPENDIX 1: SUGGESTED REFERENCES FOR ENVIRONMENTAL EMERGENCIES PREVENTION, PREPAREDNESS AND RESPONSE MEASURES AND DEVELOPMENT OF ENVIRONMENTAL EMERGENCY PLANS 28

APPENDIX 2: NOTICES/DECLARATIONS OF IDENTIFICATION OF SUBSTANCE AND PLACE, PREPARATION AND IMPLEMENTATION OF ENVIRONMENTAL EMERGENCY PLANS 31

APPENDIX 3: MODEL SUBSECTION 199(1) *CANADA GAZETTE* NOTICE 37

APPENDIX 4: SECTION 200 — LIST OF REGULATED SUBSTANCES (ALPHABETICAL ORDER) 41

APPENDIX 5: CALCULATION OF SUBSTANCE AMOUNT 48

APPENDIX 6: NOTIFICATION AND REPORTING OF ENVIRONMENTAL EMERGENCIES 51

1.0 INTRODUCTION

The *Canadian Environmental Protection Act, 1999* (CEPA 1999) aims to achieve "*the highest level of environmental quality for all Canadians*," as stated in the Act's preamble. CEPA 1999 subsection 2(a.1) also requires the Government of Canada to "*take preventive and remedial measures to protect, enhance and restore the environment.*"

Part 8 of CEPA 1999 on environmental emergencies (sections 193 to 205) provides various powers to address the prevention of, preparedness for, response to or recovery from environmental emergencies caused by uncontrolled, unplanned or accidental releases of toxic or other hazardous substances. In investigating various measures to increase the safety and security of Canadians in the event of an environmental emergency, the Government of Canada has identified sections 200 and 199 of Part 8 as important tools. These sections allow the Government of Canada to require environmental emergency plans for toxic or other hazardous substances. The primary objective for requiring environmental emergency planning under sections 200 and 199 is to ensure that appropriate risk management measures are adopted and implemented for potential risks associated with the manufacture, storage and use of toxic and other hazardous substances in Canada.

Section 200 is the regulation-making authority of Part 8, which allows the federal government to establish a list of substances that, if they enter the environment as a result of an environmental emergency: a) have or may have an immediate or long-term harmful effect on the environment or its biological diversity; b) constitute or may constitute a danger to the environment on which human life depends; or c) constitute or may constitute a danger in Canada to human life or health. The *Environmental Emergency Regulations* contain such a list of substances. Under these Regulations, an environmental emergency plan would be required of any person who owns or has the charge, management or control of any of these substances at or above specified threshold quantities, in containers also exceeding the specified quantities.

Section 199 gives the Minister authority to require the preparation and implementation of environmental emergency plans for substances listed on Schedule 1 of CEPA 1999 (the List of Toxic Substances) or for substances that the Ministers of the Environment and Health have recommended that the Governor in Council add to Schedule 1.

These Guidelines describe how Environment Canada intends to administer sections 200 and 199.

These Guidelines address only sections 200 and 199 — Authorities for Requiring Environmental Emergency Plans.

Provisions of CEPA 1999 have been reproduced for convenience of reference only and have no official sanction.

For the purposes of this document, the term *provincial legislation* shall refer to provincial, territorial and aboriginal legislation.

It is important to note that these Guidelines are intended to provide contextual information on Part 8 of the Act and on the *Environmental Emergency Regulations*. They are not aimed at replacing either of these instruments. Regulatees should refer to the Act and the Regulations to ensure that they comply with the law. For further information with respect to these Guidelines, the Regulations or the section 199 requirements, please refer to Environment Canada's Environmental Emergencies website at <www.ec.gc.ca/ee-ue/> as well as the section 200 Frequently Asked Questions, also available on the site.

2.0 SUMMARY OF CEPA 1999'S ENVIRONMENTAL EMERGENCY PLANNING PROVISIONS UNDER PART 8, SECTIONS 200 AND 199

Environment Canada's objective for environmental emergency planning in Part 8 of CEPA 1999 is to ensure that risk management measures adopted for hazardous substances include effective prevention, preparedness, response and recovery components. The Government of Canada has the authority to require environmental emergency plans to complement other existing or forthcoming risk management measures (e.g., regulations and guidelines) for hazardous substances. When a substance is declared toxic under CEPA 1999 or determined to have other hazardous properties, it may be necessary to ensure that environmental emergency measures are implemented immediately to prevent, prepare for, respond to and recover from sudden, unplanned or accidental releases of that substance.

Under section 193, CEPA 1999 defines an environmental emergency as:

> *(a) an uncontrolled, unplanned or accidental release in contravention of regulations made under this Part, of a substance into the environment; or*
> *(b) the reasonable likelihood of such a release into the environment.*

2.1 Environmental Emergencies Authorities under CEPA 1999 Part 8

Authorities under CEPA 1999 Part 8 regarding environmental emergencies enable the Government of Canada to require environmental emergency planning. Any person[1] who owns or has the charge, management or control of the hazardous substances listed in Appendix 4 may be required to have plans in place to prevent accidents and to respond quickly and effectively to such emergencies.

Canadians are becoming more aware of hazards in their community and are demanding that appropriate emergency management programs be adopted. These programs should meet or exceed international standards and best practices in order to address natural and human-caused incidents, including terrorist threats (see Appendix 1).

The Government of Canada has identified sections 200 and 199 of CEPA 1999 as essential instruments to help increase the safety and security of Canadians. They allow the Government of Canada to require environmental emergency plans for the prevention of or response to such events. In order to maintain and improve the safety of Canadians, section 200 was identified as the main regulatory tool for the prevention of environmental emergencies, while section 199 would be used only in the event that expeditious action is required for a toxic substance. A substance determined to require an environmental emergency plan under section 199 will eventually be added to the section 200 Regulations in order to allow for a consistent approach to the prevention of, preparedness for, response to and recovery from environmental emergencies.

Under section 200 of CEPA 1999, the regulation-making authority of Part 8, the Governor in Council, on the recommendation of the Minister of the Environment, has established a list of substances that, if they enter the environment as a result of an environmental emergency,

---

[1] The term *person* may include a company, an individual, or a government body.

may be harmful to the environment, its biological diversity or human life or health. Through the authorities of section 200, minimum quantities have been established for these substances, above which the Minister can require notification of places in Canada where the substances are stored or used.

Under these Regulations, a person or class of persons (e.g. industrial sector) may be required to prepare and implement an environmental emergency plan. The plan must cover the prevention of, preparedness for, response to and recovery from an environmental emergency.

For CEPA-toxic substances on Schedule 1 of CEPA 1999 and those proposed for addition, emergency planning requirements may also be triggered by publication of a notice in the *Canada Gazette* under subsection 199(1) of CEPA 1999 (see Appendix 3). Subsection 199(1) authorizes the Minister of the Environment to require the preparation and implementation of environmental emergency plans for:

- substances on the List of Toxic Substances (Schedule 1 of the Act); or
- substances determined by the Ministers of the Environment and Health to be toxic under CEPA 1999 and recommended or ordered to be added to the List of Toxic Substances.

Although section 200 is of primary importance, section 199 will continue to have a role in emergency management for CEPA toxics. In the case of certain CEPA toxics, it may be necessary to have environmental emergency measures implemented as soon as possible. In the event that the Minister determines that action must be taken quickly in order to prevent the emergency release of certain CEPA toxics, section 199 allows more expeditious emergency management planning than would section 200. Section 199 notices go directly to *Canada Gazette* Part 1 only, while the section 200 regulatory process is much more extensive.

This approach for the implementation of sections 200 and 199 is consistent with:

- the general objective of environmental protection;
- the administrative duty to take preventive and remedial measures; and
- the concept of Part 8 of CEPA 1999 serving as a "safety net" to complement other risk management measures.

All notices/declarations[2] must be sent to Environment Canada. These notices/declarations are required for the purpose of evaluating the extent to which environmental emergency plans are contributing to the management of risks to the environment and human health from hazardous and CEPA-toxic substances. Actual environmental emergency plans prepared under sections 200 and 199 are not submitted to Environment Canada unless requested. However, a copy of the environmental emergency plan must be held at the place for which it has been prepared, for inspection and, in case of an environmental emergency, for implementation. For unmanned facilities that are subject to the Regulations, a copy of the

[2] Although information submitted under a section 199 notice and the Environmental Emergency Regulations is identical and is filed in the same database, terminology differs for each process. As section 199 is not a regulation, the submission of information is done in the form of a "declaration." However, with the regulatory requirements of section 200, information is to be filed as a "notice."

plan need not be held at the facility itself. In such circumstances, it must be readily available for those individuals who are to carry out the plan in the event of an environmental emergency and for inspection by enforcement officers. Other detailed documentation may also be held separately at various locations rather than being duplicated at all locations.

Persons required to prepare an environmental emergency plan must submit three types of notices/declarations to the Minister:

- **Notice/declaration of identification of substance and place:** identifying the properties, quantity and location of the substance(s), as well as the capacity of the single largest container where the substance is stored. The notice/declaration must be filed within **90 days** after the later of i) the day on which the *Environmental Emergency Regulations* come into force, ii) the day on which a section 199 notice is published in the *Canada Gazette* Part 1 iii) the day on which the quantity first equals or exceeds the threshold quantity for any substance(s) set out in Schedule 1 of the Regulations, or iv) the day on which the capacity of the single largest container first equals or exceeds the threshold quantity for any substance(s) set out in Schedule 1 of the Regulations.

- **Notice/declaration of preparation:** stating that the environmental emergency plan has been prepared. The notice/declaration must be filed within **six months** after the later of i) the day on which the *Environmental Emergency Regulations* come into force, ii) the day on which a section 199 notice is published in the *Canada Gazette* Part 1 or iii) the day on which both the quantity and container capacity first equal or exceed the threshold quantity for that substance set out in Schedule 1 of the Regulations.

- **Notice/declaration of implementation:** stating that the implementation and testing of the environmental emergency plan have been completed. The notice/declaration must be filed within **one year** after the later of i) the day on which the *Environmental Emergency Regulations* come into force, ii) the day on which a section 199 notice is published in the *Canada Gazette* Part 1 or iii) the day on which both the quantity and container capacity first equal or exceed the threshold quantity for that substance set out in Schedule 1 of the Regulations.

Environment Canada has developed an on-line database for electronic submission of these notices/declarations, which is now available for the required submissions at www.cepae2.ec.gc.ca. Regulatees have the option of filing the notices/declarations electronically or in paper copy. However, along with each notice/declaration, a paper copy must be certified by an authorized official and sent to the appropriate Environment Canada Regional Offices (see Appendix 6).

In the event that certain information submitted in the notice/declaration of identification of substance and place becomes false or misleading, an amended notice must be submitted to Environment Canada within **60 days** (30 days for section 199) of the change.[3]

---

[3] As stated in subsection 3(4) of the *Environmental Emergency Regulations*: *"The person must resubmit the notice referred to in subsection 3(1) within 60 days after the occurrence of any of the following changes: a) any change to the information provided to the Minister under section 1 or 2 of Schedule 2, or b) any increase of 10 per cent or more in the maximum expected quantity of a substance reported under section 3(d) of*

This requirement would apply, for example, to any changes regarding the identification of the place, ownership, responsible manager, storage quantity information, etc.

The Minister may request that a random and targeted selection of environmental emergency plans prepared under Part 8 of CEPA 1999 be submitted to the Department for review as part of an ongoing auditing process. Such a selection of plans would help ensure that departmental guidance on environmental emergency issues is adequate and being properly interpreted.

In order to prevent duplication of efforts, parties may satisfy all or some of the documentation requirements of subsection 200(1) or 199(1) by using an existing emergency plan that has been prepared or implemented on a voluntary basis or for another government or under another Act of Parliament. Where such a plan does not meet all the requirements identified within either the *Environmental Emergency Regulations* or the section 199 *Canada Gazette* notice, the plan must be amended to meet the remainder of those requirements. As with all other environmental emergency plans prepared or implemented under Part 8, notices/declarations of identification of substance and place, preparation and implementation must be filed with Environment Canada.

Environment Canada is committed to ongoing consultations with federal departments, including the Department of Fisheries and Oceans, Transport Canada and Health Canada, with a view to avoiding duplication with emergency planning requirements under other legislation, such as the *Canada Shipping Act* or *Transportation of Dangerous Goods Act*.

There are strict penalties for not complying with the provisions of CEPA 1999. Part 10 (Enforcement), sections 272 to 274, outlines various offences and penalties for contraventions of the Act, regulations or agreements, for providing false or misleading information or for causing damage to the environment or risk of death or harm to persons.

When inspecting facilities, enforcement officers may inspect and examine environmental emergency plans prepared under section 199 or 200 in order to confirm that they have been prepared and implemented.

Appendix 2 of these Guidelines contains the forms for notices/declarations of identification of substance and place, preparation and implementation for environmental emergency plans. Appendix 3 contains a model subsection 199(1) Canada Gazette notice requiring environmental emergency plans, while Appendix 4 gives the list of regulated substances under the *Environmental Emergency Regulations*. Appendix 5 explains how to calculate the quantity of a regulated substance within a mixture, and Appendix 6 lists the designated points of contact for the notification and reporting of environmental emergencies.

Schedule 2." Subsection 3(5) also states that: *"The person must notify the Minister within 90 days after the quantity of the substance located at the place or the maximum capacity of the largest container in which the substance is stored, has for 12 consecutive months been less than the quantity set out for the substance in column 3 of Schedule 1."*

3.0 APPLICATION OF SECTION 200

3.1 Section 200

Section 200 of Part 8 is the regulation-making authority of CEPA 1999, which allows the Government of Canada to establish a list of substances that, if they enter the environment as a result of an environmental emergency, may harm the environment and its biological diversity, human life or health or the environment on which human life depends. An environmental emergency plan is required for any substance identified in the Regulations under section 200 that is stored or used in an amount at or above the threshold quantity in a container exceeding the specified threshold (see Appendix 4).

The primary objective for requiring environmental emergency planning under section 200 is to ensure that appropriate risk management measures are adopted and implemented for hazards associated with the manufacture, storage and use of hazardous substances in Canada.

3.2 Requirements for Environmental Emergency Plans — CEPA 1999 Subsection 200(1)

Subsection 200(1) of CEPA 1999 states:

> *The Governor in Council may, on the recommendation of the Minister and after the Committee is given an opportunity to provide its advice to the Minister under section 6, make regulations*
>
> *a) establishing a list of substances that, if they enter the environment as a result of an environmental emergency,*
>
> *i) have or may have an immediate or long-term harmful effect on the environment or its biological diversity,*
>
> *ii) constitute or may constitute a danger to the environment on which human life depends, or*
>
> *iii)constitute or may constitute a danger in Canada to human life or health;*
>
> *b) prescribing, in respect of a substance on the list established under paragraph (a), a minimum quantity;*
>
> *c) respecting the identification of the places in Canada where a substance referred to in paragraph (a), in any quantity or in the quantity prescribed for that substance under paragraph (b), is located and requiring notification to the Minister of those places;*
>
> *d) respecting the prevention of, preparedness for, response to and recovery from an environmental emergency in respect of a substance;*
>
> *e) respecting the notification and reporting of an environmental emergency;*
>
> *f) respecting the notification and reporting of the measures taken*
>
> *i) to prevent the environmental emergency, or*
>
> *ii) to repair, reduce or mitigate any negative effects on the environment or human life or health that result from the environmental emergency or that may reasonably be expected to result from it;*
>
> *g) respecting the implementation of international agreements entered into by Canada in relation to environmental emergencies; and*
>
> *h) respecting any other matter necessary for the purposes of this Part.*

Rationale

Section 200 allows the creation of a list of substances with specified threshold quantities.[4] The Government of Canada may then require environmental emergency plans for all facilities that store or use any of these substances at or above the identified thresholds.

With the help of multistakeholder consultations, *the Environmental Emergency Regulations* were selected as being the best measure to protect the environment and human health from environmental emergencies. The authorities under Part 8 of CEPA 1999 provide a "safety net" to fill the gap where no similar federal legislation exists. For instance, regulations under the *Transportation of Dangerous Goods Act*, which also require the preparation and implementation of emergency response assistance plans for substances in transport, do not take into consideration the storage and use of toxic and other hazardous substances at fixed facilities. In some cases, however, the use of the *Environmental Emergency Regulations* may entail supplementing existing regulations or other instruments such as pollution prevention planning measures found in Part 4 of CEPA 1999.

In the interest of efficiency, multistakeholder consultation selected the list of hazardous chemicals developed by the *Conseil pour la réduction des accidents industriels majeurs* (CRAIM) as the best starting point for the *Environmental Emergency Regulations*. CRAIM, the Montreal chapter of the now-defunct Major Industrial Accidents Council of Canada (MIACC), prepared a list of toxic and hazardous substances based on different sources, such as MIACC's Lists 1 and 2 as well as the U.S. Environmental Protection Agency's Risk Management Program list. During consultations, there was agreement among stakeholders to utilize the list of substances and thresholds prepared by CRAIM as the basis for the drafting of the *Environmental Emergency Regulations*. Some of the nomenclature used in the original CRAIM list was modified to match those names most commonly used, as listed under the *Transportation of Dangerous Goods Act*. In spite of this, the entire *Transportation of Dangerous Goods Act* list was not adopted for the *Environmental Emergency Regulations*, as the *Transportation of Dangerous Goods Act* threshold quantities were intended to capture smaller-quantity transported substances. Such quantities were considered too small to capture storage and chemical facilities covered by the *Environmental Emergency Regulations*.

The use of United Nations identification numbers (UN numbers) as well as the Chemical Abstracts Service Registry numbers (CAS numbers) and the classification of substances as flammable or other hazardous are identified as necessary for greater public understanding and clear communication of the regulated substances. Periodic review and reevaluation of the regulated list will be undertaken by Environment Canada to ensure the best possible protection of the environment and human health.

---

[4] A threshold quantity for a given substance would normally be a number stipulating the mass stored, processed or otherwise present at any time at a fixed facility. An exclusion of all substances with concentrations of less than those identified in column 2 of Schedule 1, regardless of the threshold quantity, exists under the *Environmental Emergency Regulations*.

Guidance

a) Factors that have been considered when determining which toxic and other hazardous substances should be subject to the requirements of section 200

The Government of Canada has taken the following factors into consideration when determining whether to publish a notice requiring the preparation and implementation of environmental emergency plans:

- toxicity and/or other hazardous properties of the substance;
- physical properties of the substance;
- the quantity of the substance in commercial use or storage in Canada to determine potential for exposure;
- historical data relating to uncontrolled, unplanned or accidental releases of these substances (e.g. frequency and severity of spills);
- data regarding toxic substances that, when released into the environment, present an immediate or long-term harmful effect to the environment, a danger to the environment on which human life depends or a danger to human life or health;
- whether the risks posed by these substances are being adequately managed by existing federal or provincial regulations or legislation. This may involve an examination of whether or not these regulations/legislation achieve or take into account the environmental goal of preventing, preparing for, responding to or recovering from a sudden, unplanned or accidental release of the substance. In the event that regulations/legislation have not yet been developed for specific substances, this information may also be incorporated into the assessment process;
- review of existing regulations/legislation to avoid duplication; and
- results of Environment Canada's risk evaluation framework analysis.

Environment Canada has developed a rationale for inclusion of the current 174 substances listed on Schedule 1 of the *Environmental Emergency Regulations*. The justification for their specified threshold quantities is also provided. Since this list is essentially a combination of substances from two sources (U.S. Environmental Protection Agency's Risk Management Planning Rule and the former MIACC), the criteria used in making the original selections by those organizations are outlined. This document can be found on Environment Canada's Environmental Emergencies website at <www.ec.gc.ca/ee-ue/main/main_e.asp>.

Hazardous substances were included on the list based on their toxicity, physical state, vapour pressure and accident history. The minimum vapour pressure for hazardous chemicals to be included on the list is 10 millimetres of mercury (mmHg). Hazardous liquids with a vapour pressure of 10 mmHg or higher under ambient conditions will vaporize, presenting a significant risk to human life and health and to the environment. It was felt that, for the purposes of these Regulations, toxic substances with lower vapour pressures will not readily vaporize and therefore do not pose a significant risk when released during an environmental emergency.

Flammable gases and volatile flammable liquids were also included on the list based on the flash point and boiling point criteria used by *Transportation of Dangerous Goods Clear*

Language Regulations — e.g. a flash point below 23°C and a boiling point below 35°C. Flammable substances fulfilling the Transportation of Dangerous Goods criteria will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or are easily dispersed in air and will burn readily. Only those substances in commercial production or use were listed.

Some chemicals are considered both hazardous and flammable. The ranking process took both criteria into account, and the threshold quantity was set in accordance with the toxic index that was calculated. Toxic and flammable chemicals that had a toxic index that would have resulted in threshold quantities in excess of 10 000 pounds were defaulted to the 4.50 tonne (10 000 pounds) threshold used for most of the flammable substances.

The regulated list is not a static one. As the rationale for the CRAIM list was focused almost exclusively on human health and safety issues, Environment Canada has refined the data-gathering guidelines, the risk evaluation framework and the rationale by integrating environmental considerations in keeping with the goals of CEPA 1999: the mutual protection of both the environment and human health. In order to determine if an environmental emergency plan is required, Environment Canada used the risk evaluation framework, which is an unbiased scoring system using chemical, physical and health impact parameters as inputs. Economic inputs were also considered in the evaluation of each material. The above-mentioned reports are currently available on Environment Canada's Environmental Emergencies website at <www.ec.gc.ca/ee-ue/main/main_e.asp>.

The section 200 list of hazardous substances currently contains 16 materials that were classified as toxic under CEPA 1999. Following promulgation, Environment Canada will continue to assess the remaining CEPA toxics and other substances of concern (e.g., reactives, pesticides, biologics, ammonium nitrate, etc.) for possible inclusion on the section 200 list. As part of this ongoing process, substances may be added to or dropped from the current list or thresholds adjusted if new data show that to be warranted.

b) Factors that have been considered when determining who will have to prepare and implement an environmental emergency plan under section 200

Unless specifically exempted, an environmental emergency plan is required of any person who owns or has the charge, management or control of any of the regulated substances at or above the specified threshold quantities and that have a single largest container with a capacity equal to or exceeding the listed amount. If either the maximum expected quantity on site or the largest storage container exceeds the specified threshold quantity, but not both, the facility will be required only to fill out the first notice of identification of substance and place. The requirement to prepare and implement an environmental emergency plan will not apply. Specific exemptions are for:

- all concentrations below those identified in column 2 of Schedule 1 of the Regulations;
- vapour/partial pressure equal to or less than 10 mmHg for hazardous substances;
- boiling point equal to or above 35°C for flammable substances;
- flash point equal to or above 23°C for flammable substances;

- quantities of the substance that are temporarily stored for 72 hours or less in a container not normally located at the place;
- quantities of the substance in a container that has a maximum capacity of 30 kg or less;
- quantities of the substance when it is a component of another regulated substance;
- quantities of the substance when it is a component of natural gas, except if the natural gas is in liquefied form;
- quantities of the substance in a fuel tank that supplies the engine of a conveyance that is used for transportation; and
- quantities of a substance regulated under the *Transportation of Dangerous Goods Act*.

3.3 Application of Provisions

Persons required to prepare an environmental emergency plan under the *Environmental Emergency Regulations* must submit three types of notices to the Minister, as explained in section 2.1 of these Guidelines.

A plan will be considered implemented when it has been written and is operational to the point where the regulatee submitting the notice can expect to successfully deal with all aspects of an environmental emergency.

For regulatees with several facilities or places where hazardous substances are located, an environmental emergency plan specific to each location will generally be required. These plans must address prevention, preparedness, response and recovery for an uncontrolled, unplanned or accidental release of any regulated substance at that location. For each place (typically site or property), notices of identification of substance and place, preparation and implementation should be submitted, and a site-specific environmental emergency plan must be prepared, implemented and kept at that location. A single environmental emergency plan may deal with one or more substances but must address the full range of hazards present on the site. Separate documents can be prepared, but they must be readily available and kept in the same location.

If regulated substances are stored or used at a person's unmanned facilities that are subject to the Regulations, a copy of the plan need not be held at the place itself. However, it must be readily available for the individuals who are to carry out the plan in the event of an environmental emergency and for inspection by enforcement officers.

Under certain circumstances, the Minister may require the submission of all or part of a plan when it has been determined that there is a need to develop further risk management measures in relation to specific substances in the plan.

4.0 ENVIRONMENTAL EMERGENCY REPORTING REQUIREMENTS — SECTION 201

Section 201 of CEPA 1999 requires that, when an environmental emergency occurs for any of the substances on the list established on Schedule 1 under the *Environmental Emergency Regulations*, any person who owns or has the charge, management or control of the substance immediately before the emergency shall, as soon as possible, notify an enforcement officer or any other person designated pursuant to the Regulations. In addition, this person must abide by a number of other requirements, such as taking all reasonable measures consistent with protection of the environment and public safety and providing a written report. The above obligations also apply to a person who causes or contributes to the emergency.

There are no environmental emergency notification and reporting thresholds associated with the 174 substances listed in Schedule 1 of the Regulations at this time. Specific notification and reporting points of contact as well as verbal and written report information requirements are contained in Appendix 6 of these Guidelines.

While the *Environmental Emergency Regulations* will not, at least initially, be specifying any environmental emergency reporting thresholds, the department considers that existing provincial reporting thresholds, if any, or alternatively those specified under the *Transportation of Dangerous Goods Act* are acceptable for the purposes of meeting obligations under the general provisions of section 201 of CEPA 1999 (see Appendix 6). This would eliminate confusion and also contribute to federal/provincial harmonization in this area.

5.0 APPLICATION OF SECTION 199

5.1 Section 199

Subsection 199(1) of CEPA 1999 authorizes the Minister of the Environment to require any person or class of persons to prepare and implement an environmental emergency plan respecting the prevention of, preparedness for, response to and recovery from an environmental emergency for substances on the List of Toxic Substances in Schedule 1 of CEPA 1999 and substances the Ministers of the Environment and Health have recommended or ordered to be added to Schedule 1 of the Act. However, as previously mentioned, section 200 was identified as the main regulatory tool for the prevention of environmental emergencies, and section 199 would be used only in the event that more expeditious action is required. The following information is provided in order to offer guidance in the event that a section 199 notice might be issued.

5.2 Requirements for Environmental Emergency Plans — CEPA 1999 Subsection 199(1)

According to CEPA 1999 subsection 199(1):

> *The Minister may at any time publish in the Canada Gazette, and in any other manner that the Minister considers appropriate, a notice requiring any person or class of persons described in the notice to prepare and implement an environmental emergency plan respecting the prevention of, preparedness for, response to or recovery from an environmental emergency in respect of*
>
> *(a) a substance or group of substances on the List of Toxic Substances in Schedule 1; or*
> *(b) a substance or group of substances in relation to which there has been published in the Canada Gazette*
> *(i) a statement of the Ministers under paragraph 77(6)(b) indicating that the measure that they propose to take, as confirmed or amended, is a recommendation that the substance be added to the List of Toxic Substances in Schedule 1, or*
> *(ii) a copy of an order proposed to be made under subsection 90(1).*

Rationale

The Minister may require a person or class of persons to prepare an environmental emergency plan for a substance that is on the List of Toxic Substances or has been recommended or ordered to be added to the List. A notice published in the *Canada Gazette* must indicate the recommendation of a substance's addition to the List of Toxic Substances before an environmental emergency plan may be required for that substance under section 199. Note that the requirement for environmental emergency plans can occur only in relation to those aspects of an environmental emergency that:

a) have or may have an immediate or long-term harmful effect on the environment;
b) constitute or may constitute a danger to the environment on which human life depends; or
c) constitute or may constitute a danger to human life or health in Canada.

Although the frequent use of section 199 *Canada Gazette* notices is not anticipated, their publication, as with section 200 of CEPA 1999, would require that any person who owns or has the charge, management or control of the particular CEPA toxic at or above the specified threshold quantity prepare and implement environmental emergency plans. The same timelines would apply, as with section 200; however, given that section 199 was created in conjunction with pollution prevention planning, some differences do arise. Unlike section 200, section 199 allows for the official request of time extensions, although these must be reviewed and approved by the Minister before they are permitted. As per the pollution prevention timelines identified in subsection 58(3) of CEPA 1999, any information submitted under section 199 that becomes false or misleading requires Environment Canada to be notified within 30 days of the change, rather than the 60 days identified by the *Environmental Emergency Regulations*. In most cases, when a CEPA toxic is determined to require an environmental emergency plan under section 199, it will be added to the list of substances under the *Environmental Emergency Regulations* and subject to its requirements.

Guidance

a) Factors that may be taken into consideration when determining which toxic substances should be subject to the requirements of section 199

The Department may make a recommendation to the Minister that an environmental emergency plan should be required following the criteria mentioned above. At any time, the Minister may require that environmental emergency plans be prepared and implemented for substances already placed on Schedule 1 of the Act or substances recommended or ordered for addition to the List of Toxic Substances. Information about CEPA 1999 and the substances on Schedule 1 is available from the following website: <www.ec.gc.ca/CEPAregistry>.

For materials or mixtures that contain substances declared toxic under CEPA 1999, the requirement to prepare and implement an environmental emergency plan specific to the toxic substance may depend upon several factors (e.g., the concentration of the substance or the volume of the material). Given that the intent of section 199 is to prevent harm from toxic substances, the requirement to prepare and implement an environmental emergency plan specific to the toxic substance will be made on a case-by-case basis.

b) Factors that may be taken into consideration when determining when an environmental emergency plan would be required under section 199

For substances on the List of Toxic Substances in Schedule 1, the Minister may take the following factors into consideration when determining whether an environmental emergency plan would be required:

- whether the substance is currently imported, manufactured, used or stored in Canada;
- whether the management option for the substance includes the requirement for an emergency plan outlining preventive, control or remedial measures (or equivalent) that adequately address prevention of, preparedness for, response to and recovery from an environmental emergency; and
- for all other commercial, manufacturing, processing or other activities from which

the Minister is satisfied that the uncontrolled, unplanned or accidental release of the toxic substance:

a) has or may have an immediate or long-term harmful effect on the environment;
b) constitutes or may constitute a danger to the environment on which human life depends; or
c) constitutes or may constitute a danger to human life or health in Canada.

For regulatees with several facilities or places where toxic substances are located, an environmental emergency plan specific to each location may be required. As with section 200, these plans must address prevention, preparedness, response and recovery for an uncontrolled, unplanned or accidental release of a toxic substance at that location. For each location, a declaration of identification of substance and place, preparation and implementation must be submitted, and a site-specific environmental emergency plan must be prepared and kept at that location.

5.3 Emergency Management during Interim Periods

The Minister of the Environment may require an environmental emergency plan for substances the Ministers of the Environment and Health have recommended:

- under paragraph 77(6)(b) that the Governor in Council add to Schedule 1 of the Act; or
- under subsection 90(1) that the Governor in Council make an order adding the substance to Schedule 1 of the Act.

This plan may be required as a temporary instrument for the interim period until risk management measures that address environmental emergencies are implemented satisfactorily; however, nothing precludes the environmental emergency plan from being used as a permanent risk management tool for a substance. Substances determined to require environmental emergency plans under section 199 will most likely be proposed for addition to the section 200 regulated list.

5.4 Extensions of Time — CEPA 1999 Subsection 199(3)

CEPA 1999 subsection 199(3) states that where the Minister is of the opinion that further time is necessary to prepare or implement the plan, the Minister may extend the period for a person who submits a written request before the expiry of the period referred to in the notice or of any extended period.

Rationale

Unlike section 200 of CEPA 1999, persons affected by a section 199 *Canada Gazette* notice have the option of requesting an extension for the time needed to submit their declarations of identification of substance and place, preparation and implementation. Subsection 199(3) gives the Minister the authority to extend the time limit set in a notice made under subsection 199(1) when a written request for an extension is submitted before the end of this limit or another extension and the Minister believes that extra time is necessary.

Guidance

In general, the Minister will provide a period of 90 days after the publication of a subsection 199(1) notice for the declaration of identification of substance and place to be filed, where the quantity and location of the substance are identified. The preparation of environmental emergency plans is to be completed within six months of the notice, and a further six months is provided for completion of the implementation of the plan. In order for the Minister to decide whether an extension should be granted, a request must be submitted to the Minister prior to the end of the time limit set in the notice. The Minister must be of the opinion that further time is necessary.

5.5 Application of Provisions

Persons required to prepare an environmental emergency plan under section 199 must submit three types of declarations to the Minister, as explained in section 2.1 of these Guidelines.

6.0 CONTENT OF AN ENVIRONMENTAL EMERGENCY PLAN

For those persons having to prepare environmental emergency plans under either section 200 or section 199, Part 8 of CEPA 1999 requires that prevention, preparedness, response and recovery aspects be addressed. To familiarize those having to prepare the necessary documentation with Environment Canada's expectations, the general concepts associated with these four main elements are provided in the following section. It is recognized that not all of these elements may be covered in a single report. Nevertheless, required documents must be kept together and be accessible for an enforcement officer. Other detailed documentation may be held separately at various locations rather than being duplicated at all locations.

Guidance

Prevention

The likelihood of environmental emergency events can be reduced by identifying in advance the frequency, potential consequences and impacts of such events. The prevention of such emergencies includes several components, the most important being the knowledge gained from evaluating the risks associated with the substance(s) of concern. As most incidents leading to an emergency are caused by deviations from normal conditions within a facility, the evaluation of past emergency events occurring at the site and at other similar places in Canada and the range of potential scenarios, including worst probable case, is critical to understanding a facility's capabilities and resources in the event of a crisis. This does not imply planning for every imaginable worst case scenario, as this is not practical, however, the plan should address those worst probable cases and other scenarios that may be credible.

The key to reducing the frequency and severity of environmental emergency events is preventing them from happening in the first place. The most effective risk management actions combine prevention activities with appropriate preparedness and response. Case histories have shown that it is much more cost effective to implement an appropriate risk management program in advance than to repair any resulting damage done to the place or to the environment after the fact. With preventive action, problems can be anticipated, corrective action can be taken and risks can be managed to avoid environmental damage. For the purposes of these Guidelines, prevention refers not only to mitigation measures such as maintenance and spill containment, but also to the management systems for design and operation and to ensuring that the facility operates as intended.

For process industries in Canada, the application of management principles and systems to the identification, understanding and control of process hazards to prevent process-related injuries and accidents is referred to as process safety management. A number of such systems have been developed; those of the Center for Chemical Process Safety and the American Petroleum Institute are listed in Appendix 1. The programs are designed to address key elements of process safety management, such as:

- risk assessment;
- facility design and construction to specific standards;
- preventive maintenance checks and programs;
- maintaining effective operating procedures and facility documentation;
- operator competence assurance;

- process and procedures to ensure that changes in design or service or staff are effectively managed and to minimize impacts on operations;
- incident investigation and analysis to minimize recurrence; and
- assessment of compliance to standards.

Typically, issues such as process risk management, management of change and management of human factors, among others, are documented and complement traditional health and safety programs and applicable federal/provincial legislation. A complete framework of process safety management elements is recommended, even though some elements may be less applicable than others, depending on the nature and degree of potential hazards involved. Each element should be considered before assuming it is not applicable.

Preparedness

Under the obligations of the *Environmental Emergency Regulations*, a regulatee must accomplish the following:

- identify potential risks;
- document alternative scenarios and potential consequences;
- develop environmental emergency plans to deal with the risks;
- train personnel to apply the environmental emergency plans; and
- regularly review and practise these strategies.

To enhance the level of preparedness, key people, including representatives of key stakeholder groups in and around a regulatee's facility that may be affected, should be involved with the development and implementation of the environmental emergency plan, particularly first responders.

A regulatee must identify whether adequate capabilities and resources exist to enable those involved to safely respond to the full range of potential emergencies. Preparedness planning should recognize that depending on the significance and possible escalating nature of particular events, a facility's capabilities and resources to effectively respond may prove to be inadequate. In such instances, required resources and equipment could be obtained through arrangements or mutual aid agreements with other industries and outside agencies. Identified gaps should be filled, equipment should be upgraded, staff should be expanded and there should be increased communication between neighbouring facilities, community officials, public safety agencies, etc. Preparedness measures should identify all activities essential to ensuring a high degree of readiness for a prompt and effective response to an environmental emergency. Periodic drills and exercises as well as effective training for key personnel in and around the regulatee's facility provide the means of testing the facility's resources and equipment and also raise awareness. Equipment needed during an emergency should be readily available and regularly maintained and tested. An inventory of equipment currently available on and off the site, along with the quantity, location, description, intended use and capabilities, must be retained and accessible to responders. An emergency plan must be regularly reviewed to ensure that changes within the facility are integrated into the plan. By implementing effective prevention measures (such as risk management programs that address all possible emergency situations), persons preparing and implementing an environmental emergency plan can determine the necessary level of preparedness for each situation.

Response

Response to an environmental emergency includes many facets, such as maintaining communication systems between stakeholders, alerting and warning regulatees and, if needed, evacuating and accounting for personnel and the public. These needs can vary greatly in scope, depending on the nature and magnitude of the emergency. Quick and effective response relies on sound planning and pre-established partnerships. Effective emergency response calls for cooperation between industries, communities, local organizations and government through partnerships formed before emergencies occur. Such partnerships can be strengthened through the regular exercise of the environmental emergency plan with all of those involved. Communication from the facility to off-site agencies and between responders is important and necessary for a coordinated and successful response effort. Effective emergency response includes, but is not limited to, quick activation of the emergency plan, proper notification of the emergency to first responders and affected parties, rapid assessment of the probable path and impacts of an emergency, adequate resource mobilization and reporting activities. Response is intended to include all aspects of managing an emergency situation, until the emergency phase of the event is considered over.

Recovery

Recovery refers to the restoration of any part of the environment damaged by or during the emergency. Recovery affects both the operating entity itself and the surrounding community. The issue of recovery is best managed through discussions between all involved parties to assess the damage and agree on a restoration plan. The level of environmental restoration is determined by many factors, such as size, persistence and toxicity of a release; therefore, recovery of an area to its natural state is not always possible. Thus, restoration plans are situation specific and would need to be defined in terms of acceptability to affected stakeholders.

Recovery from an environmental emergency involves activities and programs designed to return the place and its surrounding environment to a safe and acceptable condition. The general objective of the recovery portion of an environmental emergency plan should be to provide sufficient direction to reduce impacts to the environment and to minimize the recovery time from a particular incident.

The regulatee and public authorities should initiate recovery processes as soon as possible, striving for a rapid recovery from environmental damage and, if feasible, a quick return to normal facility operations. Those leading the recovery effort must be aware that rapid response without assessing the risks associated with the recovery effort can lead to increased damage and longer recovery times for the environment. The recovery/business resumption process either can begin during response or can be initiated in stages until normal operations are restored. Planning for the recovery phase during the prevention, preparedness and response process will improve recovery time and reduce impacts to the environment.

Factors such as the extent of damage, availability and commitment of personnel, resources and finances all determine how long the recovery process will take. It is important to establish a pre-planned capability to recover and undertake swift damage assessments, because the longer it takes to recover, the higher the ultimate cost.

Four suggested steps to damage assessment in a recovery situation are as follows:

1) Determine the extent of the damage and appropriate communication to all relevant parties, including the public.
2) Develop a system to bring in the proper resources, including people, at the right time.
3) Work with outside resources to support recovery.
4) Organize community resources necessary for people recovering from an emergency situation.

Rationale

The complexity of environmental emergency plans may vary depending upon the circumstances. Although the primary goal of preparing and implementing an environmental emergency plan is to prevent emergencies from occurring, planning is critical for preparedness and response activities in the event that an emergency does occur. The Regulations set out the minimal elements but do not however, prescribe the form of the environmental emergency plan. Appendix 1 provides a list of references that may be utilized when preparing an environmental emergency plan, covering prevention, preparedness, response and recovery. Regulatees may prepare a plan in the form that makes the most sense for their organization, so long as the plan is aimed at reducing potential risks and addresses the following elements:

- the properties and characteristics of the substance;
- the maximum expected quantity of the substance at the place at any time during a calendar year;
- the commercial, manufacturing, processing or other activity in relation to which the plan is prepared;
- the characteristics of the place where the substance is located and of the surrounding area that may increase the risk of harm to the environment or of danger to human life or health; and
- the potential consequences from an environmental emergency on the environment and on human life or health. Consequences are identified through the use of worst-probable-case and alternative scenarios. For more information, see the Risk Management Guide for Major Industrial Accidents (CRAIM), version 2002.

If an environmental emergency plan is required under the *Environmental Emergency Regulations*, the following elements are compulsory. Although they are not mandatory under section 199, they must be considered:

- a description of the factors considered above;
- the identification of any environmental emergency that can reasonably be expected to occur at the place and that would likely cause harm to the environment or constitute a danger to human life or health, and identification of the harm or danger;
- a description of the measures to be used to prevent, prepare for, respond to and recover from any environmental emergency identified above;
- a list of the individuals, identified by name or position, who are to carry into effect the plan in the event of an environmental emergency and a description of their roles and responsibilities;
- the identification of the training required for each of those individuals;
- a list of the emergency response equipment included as part of the environmental emergency plan and the equipment's location; and

- the identification of measures to be taken to notify members of the public who may be adversely affected by an environmental emergency.

Environment Canada also strongly encourages the identification of a facility's five-year accident history, including all accidental releases that have resulted in deaths, injuries or significant property damage on site or known off-site deaths, injuries, evacuations, sheltering in place, property damage or environmental damage. In addition, senior-level commitment to the environmental emergency planning measures identified is considered critical, both at the corporate level and at the facility concerned.

Environment Canada strongly recommends that persons preparing an environmental emergency plan include community and interest groups as well as local and provincial emergency authorities in the development and preparation of the plan and also share the implemented plan with these persons. Communication of risk to surrounding communities is an essential component of both prevention and preparedness activities. Communication of information on what the public should do in the event of an emergency is critical, and the ability of the public to react is an essential component of preparedness. Communication of this nature can help dispel undue fears over risks that may not be present and can also assure the community that risks that are present are under proper control. It is important to note, however, that there may be security issues regarding the information being communicated, and some restrictions may apply.

Tests and exercises are a simulation of a possible emergency. Testing of the environmental emergency plan shows if the place can adequately deal with the scenario that is presented in the exercise. Initial testing should include informing those affected that a test is being planned. This will enable responders and participants to react in the proper manner through adequate pre-planning. Once the skills and knowledge have been demonstrated, the scenario can be tested with only the exercise design team knowledgeable in advance. Testing must reflect a credible type of event for the place in question. When designing an exercise, the planners should ensure that it reinforces any previous training, is simple enough that available resources are adequate but difficult enough to be challenging, provides maximum lessons learned, includes post-exercise evaluation and corrective action and is cost effective.

The type of exercise chosen depends on its purpose, the availability of resources and the limitations of conducting exercises that apply to the location of operations. Exercises can be either administrative or operational. Administrative exercises are usually held in a conference room environment and can be tabletop or synthetic. Synthetic exercises are pre-programmed exercises in which all participants use computers. Operational exercises include those where communications are tested and major or full-blown exercises. A major exercise is similar in content to a tabletop exercise except that it is intended to provide a realistic simulation of an emergency response and all the required resources are actually deployed.

High-profile facilities such as refineries, petrochemical plants, etc., and other places with real potential for serious and irreversible harm to human health or the environment should have to develop and execute a full-blown emergency response exercise. Depending on the nature of the hazard and situation, sites with lower hazards or single substances could use generic plans and exercises developed by their associations, adapted and implemented locally.

The exercise design process is composed of five main steps:

1) devising a multi-year program; a full-blown exercise may not be necessary every year, but should be conducted at least once as part of the multi-year cycle;
2) planning the annual exercise;
3) holding the exercise;
4) evaluating the outcomes; and
5) reporting on the outcomes.

If more than one of the listed substances are identified in a regulatee's facility's plan, it is not necessary to carry out exercises for each of them. The Regulations provide maximum flexibility for deciding how this can be documented in the environmental emergency plan and carried out. One approach might be to address all the flammables and the other hazardous substances as two separate groups in the plan and document the prevention, preparedness, response and recovery activities required for each group. For example, testing could focus on the flammables during the first year, while the other hazardous substances could be covered the following year. The principal objective is to ensure that all aspects of the plan are fully evaluated over the multi-year testing cycle.

The insights gained from this process are invaluable to the regulatee should a real emergency ever occur. Further information on testing and exercising of environmental emergency plans can be found in some of the suggested references in Appendix 1.

Responding to an actual incident is not usually a valid or appropriate test of the emergency plan. An actual incident may be considered a test of the environmental emergency plan only if certain conditions are met. For an actual incident to be recognized as a test, it must include the appropriate agencies, proper debriefing and evaluation, corrective actions and documentation as in a typical exercise. Solely responding to an actual incident is not necessarily a valid or appropriate test of the emergency plan, as follow-up to determine what happened and its broader implications for the plan as a whole is required for learning and improvement. It would be detrimental to apply an untested plan, as it may not be adequate to handle the emergency at hand. Testing or exercising enables critical aspects of the plan to be examined in a structural way, simulating conditions to reveal major mistakes and omissions so that they can be subsequently corrected without disastrous consequences.

The Regulations require that a record of all results obtained during the annual review or testing of the environmental emergency plan must be kept on site for not less than five years. This record must be available for inspection with the plan itself.

7.0 PUBLIC ACCESS TO SUBMITTED NOTICES AND DECLARATIONS

Regulatees will have the option of submitting the required information in hard copy or electronically. Unfortunately, electronic signatures are not available at this time; therefore, a copy of the notice/declaration must be signed by an authorized official designated by the regulatees concerned and sent to the appropriate Environment Canada Regional Office (see Appendix 6). Once reviewed, the notices/declarations (minus any sensitive information) will be posted on the CEPA Registry, where they will be available to the public. However, in concert with the Canadian Security Intelligence Service, steps will be taken to manage the sensitive information in a way that does not place Canadians at risk through access to such information by potential criminal or terrorist elements.

Any person submitting information to the Minister is entitled to submit a request under section 313 of CEPA 1999 that specific information be treated as confidential. All such requests will be reviewed under the provisions of sections 315 to 321 of CEPA 1999 and section 20 of the *Access to Information Act*. Note, however, that sections 315 to 321 of CEPA 1999 authorize the Minister of the Environment to release information covered by section 20(1) of the *Access to Information Act* in some circumstances.

The following excerpt from the *Access to Information Act* provides guidance as to the type of third-party information that *might* be considered confidential business information:

> *20(1) Subject to this section, the head of a government institution shall refuse to disclose any record requested under this Act that contains:*
>
> *a) trade secrets of a third party;*
> *b) financial, commercial, scientific or technical information that is confidential information supplied to a government institution by a third party and is treated consistently in a confidential manner by a third party;*
> *c) information the disclosure of which could reasonably be expected to result in material financial loss or gain to, or could reasonably be expected to prejudice the competitive position of, a third party;*
> *d) information the disclosure of which could reasonably be expected to interfere with contractual or other negotiations of a third party.*

As per the authorities under section 313 of CEPA 1999, most of the information submitted under the *Environmental Emergency Regulations* and section 199 requirements will be publicly available on the CEPA Registry. This is consistent with the government's commitment under CEPA 1999 to provide Canadians with increased access to information and more opportunities for input before decisions are made. However, in order to comply with existing federal legislation related to confidential business information and national security considerations, some detailed information about chemical substances, such as the exact quantities and location of the chemicals, may not necessarily be released to the public.

Arrangements are put in place to ensure that even sensitive information that is classified for either confidential business information or national security reasons will be accessible, to the extent legally permissible, by first responders on a need-to-know basis. Regulatees who are subject to the *Environmental Emergency Regulations* will be encouraged to work with local emergency response personnel and community groups in preparing and implementing their environmental emergency plans.

Both the Green Lane and the CEPA Registry are Internet-based and publicly accessible. The CEPA Registry is a comprehensive on-line source of public information relating to activities under CEPA 1999. The Registry contains factual information about CEPA-related activities and provides a source of current information on CEPA 1999 instruments and a directory of consultation opportunities and contacts. It also enables the public to monitor proposed Regulations and Orders from their initial publication in Part 1 of the *Canada Gazette* through public consultations and their final publication in Part 2 of the *Canada Gazette*.

8.0 COMPLIANCE AND ENFORCEMENT

As part of an ongoing monitoring process, Environment Canada will be requesting copies of some environmental emergency plans prepared under Part 8 of CEPA 1999 be submitted to the Department for review, in both a random and targeted manner. Such action will help the Government of Canada determine whether departmental guidance on environmental emergency planning is adequate and being properly interpreted. An ongoing auditing of environmental emergency plans is also necessary to ensure that security is upheld within all affected areas in Canada.

Since the *Environmental Emergency Regulations* have been promulgated under CEPA 1999, when verifying compliance with the Regulations, Enforcement officers will apply the Compliance and Enforcement Policy for CEPA 1999. This policy sets out the range of possible responses to violations: warnings, directions, environmental protection compliance orders, ticketing, ministerial orders, injunctions and prosecution as well as environmental protection alternative measures.

Enforcement officers are entitled to enter places and inspect environmental emergency plans under section 218 of the Act in order to confirm that they have been prepared and are being implemented in accordance with the *Environmental Emergency Regulations* and section 199 notices/declarations that have been filed. Enforcement officers may do so at facilities targeted for other inspections or investigations or on a random basis, and also during or after an emergency response.

Enforcement officers will make determinations on the completeness of the documents. Environment Canada will continue to evaluate the adequacy of the results obtained through the submission of section 200 and section 199 notices/declarations in order to determine which plans are to be reviewed.

When an enforcement officer discovers an alleged violation, the officer will choose the appropriate enforcement action based on the nature of the alleged violation and the effectiveness in achieving compliance within the shortest possible time with no further repetition of the violation.

9.0 CONCLUSION

The environmental emergency planning provisions of CEPA 1999 provide a new authority for the Minister of the Environment to use a more flexible instrument for the management of risks to the environment and human health associated with the uncontrolled, unplanned or accidental release of toxic and hazardous substances.

It is expected that the creativity and innovation of those affected and concerned by these Regulations will promote the rapid improvement of overall environmental performance and awareness in Canada.

APPENDIX 1

SUGGESTED REFERENCES FOR ENVIRONMENTAL EMERGENCIES PREVENTION, PREPAREDNESS AND RESPONSE MEASURES AND DEVELOPMENT OF ENVIRONMENTAL EMERGENCY PLANS

SUGGESTED REFERENCES FOR ENVIRONMENTAL EMERGENCIES PREVENTION, PREPAREDNESS AND RESPONSE MEASURES AND DEVELOPMENT OF ENVIRONMENTAL EMERGENCY PLANS

General

Organisation for Economic Co-operation and Development (OECD). *OECD Guiding Principles for Chemical Accident Prevention, Preparedness and Response: Guidance for Public Authorities, Industry (including Management and Labour), Communities and Other Stakeholders.* Paris: OECD, 2002. Document to become available in spring 2003 through the OECD Chemical Accident Prevention, Preparedness and Response website: <www.oecd.org/env/accidents>.

Conseil régional des accidents industriels majeurs (CRAIM). *Guide de gestion des risques d'accidents industriels majeurs à l'intention des municipalités et de l'industrie.* Montréal: CRAIM, 2000. This document is currently available in both French and English.

Emergency Management

National Fire Protection Association (NFPA). *NFPA 1600: Standard for Disaster/Emergency Management*, 2000 Edition. Quincy, Massachusetts: NFPA, 2000. This document can be ordered from NFPA at 1-800-344-3555 or from their website at <catalog.nfpa.org> ($23.50 US).

Canadian Standards Association (CSA). *Emergency Planning for Industry: A National Standard for Canada* (CAN/CSA-Z731-95). Toronto: CSA, 1995. This document can be ordered from CSA International at 1-800-463-6727 or from their website at <www.csa-international.org> (ID# 2004922; $65). [SOON TO BE REVISED]

Canadian Association of Fire Chiefs. *Community Self-Assessment Tool.* Ottawa: Canadian Association of Fire Chiefs, 1999. Available through the Canadian Association of Fire Chiefs website at <www.ptsc-program.org>.

United Nations Environment Programme (UNEP). *APELL, Awareness and Preparedness for Emergencies at a Local Level: A Process for Responding to Technological Accidents.* Paris: UNEP, 1988. This document can be ordered from UNEP's on-line bookshop at <www.EarthPrint.com> (ISBN 9280711830; Stock No. AP1; $15 US estimated cost; may change without notice).

Process Safety/Risk Management

Canadian Society for Chemical Engineering (CSChE). *Site Self-Assessment Tool.* Ottawa: CSChE, 1999. This document is available for downloading free of charge from CSChE's Process Safety Management website at <www.chemist.ca/division/psm>.

Canadian Society for Chemical Engineering (CSChE). *Process Safety Management*, 3rd Edition. Ottawa: CSChE, 2002 (ISBN 0-920804-96-9). This document is available for downloading free of charge from CSChE's Process Safety Management website at

<www.cheminst.ca/division/psm> or may be purchased from CSChE (telephone (613) 232-6252; $20). [SOON TO BE REVISED]

Canadian Association of Fire Chiefs. *Hazardous Substances Risk Assessment: A Mini-Guide for Municipalities and Industry*. Ottawa: Canadian Association of Fire Chiefs, 1994. This document can be obtained from the Fire Services Resource Centre in Toronto (telephone 1-800-668-2955; $75). [SOON TO BE REVISED]

U.S. Environmental Protection Agency (EPA). *General Guidance for Risk Management Programs (40 CFR Part 68)* (EPA-550-B00-008). Washington, D.C.: U.S. EPA, 2000. This document is available from the EPA website at <yosemite.epa.gov/oswer/ceppoweb.nsf/content/EPAguidance.htm>.

U.S. Environmental Protection Agency. *RMP*Comp™ Modelling Program for Risk Management Plans*. RMP*Comp™ is a free computer program that can be used to complete the off-site consequence analyses for the substances that originate from the U.S. Environmental Protection Risk Management Program list. This software can be downloaded from <yosemite.epa.gov/oswer/ceppoweb.nsf/content/rmp-comp.htm>.

American Petroleum Institute (API). *Recommended Practice 750, Management of Process Hazards*. Washington, D.C.: API, 1995. This document is available from API in Washington, D.C. (telephone (202) 682-8000 or visit its website at <www.api.org>; $42 US). [SOON TO BE REVISED]

APPENDIX 2

NOTICES/DECLARATIONS OF IDENTIFICATION OF SUBSTANCE AND PLACE, PREPARATION AND IMPLEMENTATION OF ENVIRONMENTAL EMERGENCY PLANS

NOTICES/DECLARATIONS OF IDENTIFICATION OF SUBSTANCE AND PLACE, PREPARATION AND IMPLEMENTATION FOR ENVIRONMENTAL EMERGENCY PLANS

Background

As stated in section 2.0 of this document, persons required to prepare an environmental emergency plan under sections 200 and 199 must submit three types of notices/declarations to the Minister.

Each notice/declaration must be signed by an authorized official in the affected facility.

The *Environmental Emergency Regulations* and subsection 199(4) of CEPA 1999 state that plans prepared or implemented in respect of environmental emergencies on a voluntary basis or for another government or under another Act of Parliament may be used to meet some or all of the regulatory requirements. However, where the other plan does not meet all of the requirements of the *Environmental Emergency Regulations*, the person shall amend the plan in order to meet the remainder of the requirements. Persons wishing to use a pre-existing plan are still required to submit the three notices to the Minister.

For persons or companies with several facilities or areas where hazardous substances are located who are required to prepare and implement an environmental emergency plan, a plan specific to each location may generally be required. There may be instances, however, where the prevention of, preparedness for, response to or recovery from a sudden, unplanned or accidental release of a toxic substance at that location is covered either under a larger plan (e.g., an area-wide environmental emergency plan) or under a company-wide plan for all its facilities.

For each location for which an environmental emergency plan is required, a notice/declaration of identification, preparation and implementation must be submitted. If the notice/declaration being submitted covers multiple substances of concern, detailed information for each substance must be provided. A copy of the environmental emergency plan must be held at each location. For unmanned facilities that are subject to the Regulations, a copy of the plan must be available for those individuals who are to carry out the plan in the event of an environmental emergency and for inspection by enforcement officers.

The attached documents are the notices/declarations required by the *Environmental Emergency Regulations* and section 199.

IDENTIFICATION OF SUBSTANCE AND PLACE
SCHEDULE 2 OF THE REGULATIONS

(Subsections 3(1) and (4), subparagraphs 4(1)(a)(i) and (c)(i) of the Regulations)

1. Place where one or more substances are located

(*a*) facility name (or description), civic address and location by latitude and longitude; and

(*b*) for contact person and alternate contact person: name or title, e-mail (if any), telephone number and fax number (if any).

2. Head office (if different from above)

(*a*) name and address; and

(*b*) for contact person and alternate contact person: name or title, e-mail (if any), telephone number and fax number (if any).

3. For each substance located at the place

(*a*) name of the substance;

(*b*) CAS Registry number;

(*c*) UN number (if applicable);

(*d*) maximum expected quantity at any time during the calendar year; and

(*e*) capacity of the largest container for the substance.

NOTE: Please provide the information set out in section 3 for each substance that is located at the place.

CERTIFICATION

SCHEDULE 3 OF THE REGULATIONS

(Subsections 3(6), 4(5) and 5(2) of the Regulations)

I hereby certify that the information provided in the accompanying Schedule _____ is accurate and complete.

_____

(Signature of the person or duly authorized representative)

Please print name _____

Title _____

Date _____

NOTICE

INFORMATION AND REPORT REGARDING PREPARATION
OF AN ENVIRONMENTAL EMERGENCY PLAN
SCHEDULE 4 OF THE REGULATIONS
(Subsection 4(4) of the Regulations)

1. Place where one or more substances are located

(*a*) facility name (or description) and civic address; and

(*b*) name of each substance at the place.

2. Use of prior plans

(*a*) indicate whether the environmental emergency plan was based on a plan prepared on a voluntary basis;

(*b*) indicate whether the environmental emergency plan was based on a plan prepared for another government and identify the government, if applicable; and

(*c*) indicate whether the environmental emergency plan was based on a plan prepared under another Act of Parliament and identify the Act, if applicable.

3. Local-level involvement

(*a*) name of the local authorities, community or interest groups that have been involved in the plan's development, if any; and

(*b*) identify whether the plan or its relevant parts were made available to the appropriate local authorities (such as police and fire departments) that may be involved in an emergency response.

4. Information for each substance covered by an environmental emergency plan

(*a*) name, CAS Registry number and UN number (if applicable) of the substance; and

(*b*) nature of activities at the place where the substance is located.

5. Date when the preparation of the environmental emergency plan was completed

NOTICE

IMPLEMENTATION AND TESTING OF AN
ENVIRONMENTAL EMERGENCY PLAN
SCHEDULE 5 OF THE REGULATIONS
(Subsection 5(1) of the Regulations)

1. Place where one or more substances are located

(*a*) name and civic address of facility; and

(*b*) name of each substance at the place.

2. Implementation and testing of the environmental emergency plan

(*a*) date of testing; and

(*b*) list all local authorities or community organizations or interest groups that have been involved in testing of the plan.

APPENDIX 3

MODEL SUBSECTION 199(1) *CANADA GAZETTE* NOTICE

MODEL SUBSECTION 199(1) *CANADA GAZETTE* NOTICE

Canadian Environmental Protection Act, 1999

Notice with Respect to Environmental Emergency Plans

Notice is hereby given that, pursuant to the provisions of subsection 199(1) of the *Canadian Environmental Protection Act, 1999*, the persons or classes of persons described in paragraph 1 of this notice shall prepare and implement an environmental emergency plan respecting prevention, preparedness, response and recovery for an environmental emergency in respect of [***name of substance or substances***], which [is/are on the List of Toxic Substances in Schedule 1] [the Ministers of the Environment and Health has/have recommended or ordered that the Governor in Council add to Schedule 1] of the *Canadian Environmental Protection Act, 1999* for the purpose of [***state environmental objective***].

1. *Persons required to prepare environmental emergency plans:* [***typically will specify persons required to prepare plans by referring to factors such as industry sector, use, quantity and storage volumes, rather than by naming individual companies***]. For persons or companies that have several facilities or areas where [***name of substance or substances***] [is/are] located, an environmental emergency plan specific to each location is required. In the event that a company-wide or area-wide environmental emergency plan covers several of these facilities in relation to [***name of substance or substances***], this plan can be used as a "site-specific" plan for the purposes of this notice.

2. *Period within which the plan is to be prepared:* The plan shall be prepared within [***time period to be specified; it will usually be six months***] of the date of this notice.

3. *Period within which implementation of the plan is to be completed:* Implementation of the plan shall be completed within [***time period to be specified; it will usually be twelve months***] of the date of this notice.

4. *Content of plans:* Although persons preparing plans may determine the appropriate content of their own environmental emergency plans, every person subject to this notice shall take into consideration the elements outlined in these Implementation Guidelines. These include, but are not limited to, the following:

    - the properties and characteristics of the substance;
    - the maximum expected quantity of the substance at the place at any time during a calendar year;
    - the commercial, manufacturing, processing or other activity in relation to which the plan is to be prepared;
    - the characteristics of the place and the surrounding area that may increase the risk of harm to the environment or to human life or health;
    - the potential consequences from an environmental emergency on the environment and on human life or health (consequences are identified through the use of worst-probable-case and alternative scenarios);
    - a description of the roles and responsibilities of individuals during an environmental emergency;
    - accurate contact lists for emergency resource personnel and equipment;

- identification of training required for emergency response individuals; and
- a means for ensuring that the plan is current, comprehensive and effective (e.g., routine testing and updating of the plan).

These plans must address the prevention of, preparedness for, response to or recovery from an uncontrolled, unplanned or accidental release of [***name of substance or substances***].

5. *Declaration of identification of substance and place:* Every person identified in paragraph 1 of this notice shall file, within 90 days after the later of i) the day on which this notice is published in *Canada Gazette* Part 1 or ii) the day on which the quantity exceeds the prescribed threshold quantity for that substance, a "Declaration of Identification of Substance and Place." This declaration shall provide information on:

   a) facility data;
   b) maximum substance quantity.

   Forms for this declaration are available from www.cepae2.ec.gc.ca. Each location requiring an environmental emergency plan must be covered under such a declaration.

6. *Declaration of preparation:* Pursuant to subsection 199(6) of CEPA 1999, every person identified in paragraph 1 of this notice shall file, within 6 months after the later of i) the day on which this notice is published in *Canada Gazette* Part 1 or ii) the day on which the quantity exceeds the prescribed threshold quantity for that substance, a "Declaration that an Environmental Emergency Plan Has Been Prepared and Is Being Implemented." This declaration shall provide information on:

   a) facility data;
   b) an indication of whether or not the plan is based on an existing plan;
   c) an indication of local-level involvement;
   d) an indication of plan availability for the appropriate local authorities;
   e) the commercial, manufacturing, processing or other activity in relation to which the plan is to be prepared.

   Forms for this declaration are available from www.cepae2.ec.gc.ca. Each location requiring an environmental emergency plan must be covered under such a declaration.

7. *Declaration of implementation:* Pursuant to subsection 199(6), every person identified in paragraph 1 of this notice shall file, within 1 year after the later of i) the day on which this notice is published in *Canada Gazette* Part 1 or ii) the day on which the quantity exceeds the prescribed threshold quantity for that substance, a "Declaration that the Implementation of an Environmental Emergency Plan Has Been Completed." This declaration shall confirm that the implementation of the environmental emergency plan described in the declaration of preparation has been completed. Forms for this declaration are available from www.cepae2.ec.gc.ca. Each location requiring an environmental emergency plan must be covered under such a declaration.

8. *Filing of amended declaration:* Pursuant to subsection 199(6), where the declaration contains information that, at any time after the filing, has become false or misleading, the person identified in paragraph 1 of this notice shall file an amended declaration to the Minister within 30 days after that time.

9. *Requirement to keep plan:* Every person identified in paragraph 1 of this notice shall keep a copy of the environmental emergency plan at the place in Canada for which the plan was prepared.

10. *Pre-existing plans:* If you have prepared or implemented a plan in respect of environmental emergencies on a voluntary basis, for another government or under another Act of Parliament, you may use that plan for the purposes of this notice if it meets the requirements specified in paragraph 4. If the plan does not meet all the requirements specified in paragraph 4, subsection 199(5) of CEPA 1999 provides that either the plan must be amended or an additional plan that meets the remainder of the requirements must be prepared. In any event, all persons using a pre-existing environmental emergency plan to satisfy the requirements in paragraph 4 shall file declarations of identification of substance and place, preparation and implementation.

11. *Extension of preparation date:* Where the Minister has received a written request for an extension of time to prepare an environmental emergency plan, the Minister may extend the period for preparing the plan. For an extension to be granted, the request must be submitted prior to the expiry of the period referred to in paragraph 2 of this notice and the Minister must be of the opinion that further time is necessary to prepare the plan. Information on how to submit such a request can be acquired from the following e-mail address: CEPAE2@ec.gc.ca

12. *Extension of implementation date:* Where the Minister has received a written request for an extension of time to implement an environmental emergency plan, the Minister may extend the period for implementing the plan. For an extension to be granted, the request must be submitted prior to the expiry of the period referred to in paragraph 3 of this notice, and the Minister must be of the opinion that further time is necessary to implement the plan. Information on how to submit such a request can be acquired from the following e-mail address: CEPAE2@ec.gc.ca

13. *Other matters:* [***include any other necessary information or requirements***].

14. *More information on environmental emergency planning:* Additional information and guidance on preparing environmental emergency plans may be obtained from [***possible sources of information***].

15. *Reference number:* For administrative purposes, all communication with Environment Canada concerning this notice should refer to the following reference number:

_____

Minister of the Environment

APPENDIX 4

SECTION 200 — LIST OF REGULATED SUBSTANCES
(Alphabetical Order)

SECTION 200 — LIST OF REGULATED SUBSTANCES
(Alphabetical Order)

(Schedule 1 - Part 1)
Flammable Substances

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
1	acetaldehyde	75-07-0	1089	1%	4.50
2	acetylene	74-86-2	1001	1%	4.50
3	ammonium perchlorate	7790-98-9	1442	1%	3.40
4	benzene	71-43-2	1114	1%	10.00
5	bromotrifluoroethylene	598-73-2	2419	1%	4.50
6	1,3-butadiene	106-99-0	1010	1%	4.50
7	butane	106-97-8	1011	1%	4.50
8	1-buten-3-yne (vinyl acetylene)	689-97-4	no number	1%	4.50
9	cis-2-butene (2-butene-cis)	590-18-1	1055	1%	4.50
10	trans-2-butene (2-butene-trans)	624-64-6	1055	1%	4.50
11	1-butene	106-98-9	1012	1%	4.50
12	2-butene	107-01-7	1055	1%	4.50
13	tert-butylamine (2-amino-2-methylpropane)	75-64-9	1125	1%	150.00
14	butylene (butene)	25167-67-3	1012	1%	4.50
15	carbonyl sulphide (carbon oxysulfide)	463-58-1	2204	1%	4.50
16	chlorine monoxide (dichlorine oxide)	7791-21-1	no number	1%	4.50
17	2-chloropropane (isopropyl chloride)	75-29-6	2356	1%	4.50
18	1-chloropropene (1-chloropropylene)	590-21-6	no number	1%	4.50
19	2-chloropropene (2-chloropropylene)	557-98-2	2456	1%	4.50
20	cyanogen	460-19-5	1026	1%	4.50
21	cyclohexane	110-82-7	1145	1%	550.00
22	cyclopropane	75-19-4	1027	1%	4.50
23	dichlorosilane	4109-96-0	2189	1%	4.50
24	difluoroethane (1,1-difluoroethane)	75-37-6	1030	1%	4.50
25	1,1-difluoroethylene (vinylidene fluoride)	75-38-7	1959	1%	4.50
26	dimethyl ether (methyl ether)	115-10-6	1033	1%	4.50
27	dimethyl sulphide	75-18-3	1164	1%	150.00
28	dimethylamine	124-40-3	1032 & 1160	1%	4.50
29	2,2-dimethylpropane	463-82-1	2044	1%	4.50
30	ethane	74-84-0	1035 & 1961	1%	4.50
31	ethyl chloride	75-00-3	1037	1%	4.50

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
32	ethyl ether (diethyl ether)	60-29-7	1155	1%	4.50
33	ethyl mercaptan	75-08-1	2363	1%	4.50
34	ethyl nitrite	109-95-5	1194	1%	4.50
35	ethylacetylene	107-00-6	2452	1%	4.50
36	ethylamine	75-04-7	1036 & 2270	1%	4.50
37	ethylbenzene	100-41-4	1175	1%	7000.00
38	ethylene	74-85-1	1038 & 1962	1%	4.50
39	gasoline (motor fuel)	86290-81-5	1203	1%	150.00
40	hydrogen	1333-74-0	1049	1%	4.50
41	hydrogen peroxide	7722-84-1	2015	52%	3.40
42	isobutane	75-28-5	1969	1%	4.50
43	isobutylene (2-methylpropene)	115-11-7	1055	1%	4.50
44	isopentane (2-methylbutane)	78-78-4	1265	1%	4.50
45	isoprene	78-79-5	1218	1%	4.50
46	isopropylamine	75-31-0	1221	1%	4.50
47	liquefied natural gas	8006-14-2	1972	1%	4.50
48	methane	74-82-8	1971 & 1972	1%	4.50
49	methyl formate	107-31-3	1243	1%	4.50
50	2-methyl-1-butene	563-46-2	2459	1%	4.50
51	3-methyl-1-butene	563-45-1	2561	1%	4.50
52	methylacetylene (propyne)	74-99-7	1060	1%	4.50
53	methylamine	74-89-5	1061	1%	4.50
54	naphtha	8030-30-6	1268	1%	50.00
55	1,3-pentadiene	504-60-9	no number	1%	4.50
56	n-pentane (pentane)	109-66-0	1265	1%	4.50
57	cis-2-pentene (beta-cis-amylene)	627-20-3	no number	1%	4.50
58	trans-2-pentene (trans-beta-amylene)	646-04-8	no number	1%	4.50
59	1-pentene	109-67-1	1108	1%	4.50
60	propadiene	463-49-0	2200	1%	4.50
61	propane	74-98-6	1978	1%	4.50
62	propylene	115-07-1	1077	1%	4.50
63	silane	7803-62-5	2203	1%	4.50
64	sodium chlorate	7775-09-9	1495	10%	10.00
65	tetrafluoroethylene	116-14-3	1081	1%	4.50
66	tetramethylsilane	75-76-3	2749	1%	4.50

SECTION 200 — LIST OF REGULATED SUBSTANCES
(Alphabetical Order)

(Schedule 1 - Part 1)
Flammable Substances

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
1	acetaldehyde	75-07-0	1089	1%	4.50
2	acetylene	74-86-2	1001	1%	4.50
3	ammonium perchlorate	7790-98-9	1442	1%	3.40
4	benzene	71-43-2	1114	1%	10.00
5	bromotrifluoroethylene	598-73-2	2419	1%	4.50
6	1,3-butadiene	106-99-0	1010	1%	4.50
7	butane	106-97-8	1011	1%	4.50
8	1-buten-3-yne (vinyl acetylene)	689-97-4	no number	1%	4.50
9	cis-2-butene (2-butene-cis)	590-18-1	1055	1%	4.50
10	trans-2-butene (2-butene-trans)	624-64-6	1055	1%	4.50
11	1-butene	106-98-9	1012	1%	4.50
12	2-butene	107-01-7	1055	1%	4.50
13	tert-butylamine (2-amino-2-methylpropane)	75-64-9	1125	1%	150.00
14	butylene (butene)	25167-67-3	1012	1%	4.50
15	carbonyl sulphide (carbon oxysulfide)	463-58-1	2204	1%	4.50
16	chlorine monoxide (dichlorine oxide)	7791-21-1	no number	1%	4.50
17	2-chloropropane (isopropyl chloride)	75-29-6	2356	1%	4.50
18	1-chloropropene (1-chloropropylene)	590-21-6	no number	1%	4.50
19	2-chloropropene (2-chloropropylene)	557-98-2	2456	1%	4.50
20	cyanogen	460-19-5	1026	1%	4.50
21	cyclohexane	110-82-7	1145	1%	550.00
22	cyclopropane	75-19-4	1027	1%	4.50
23	dichlorosilane	4109-96-0	2189	1%	4.50
24	difluoroethane (1,1-difluoroethane)	75-37-6	1030	1%	4.50
25	1,1-difluoroethylene (vinylidene fluoride)	75-38-7	1959	1%	4.50
26	dimethyl ether (methyl ether)	115-10-6	1033	1%	4.50
27	dimethyl sulphide	75-18-3	1164	1%	150.00
28	dimethylamine	124-40-3	1032 & 1160	1%	4.50
29	2,2-dimethylpropane	463-82-1	2044	1%	4.50
30	ethane	74-84-0	1035 & 1961	1%	4.50
31	ethyl chloride	75-00-3	1037	1%	4.50

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
32	ethyl ether (diethyl ether)	60-29-7	1155	1%	4.50
33	ethyl mercaptan	75-08-1	2363	1%	4.50
34	ethyl nitrite	109-95-5	1194	1%	4.50
35	ethylacetylene	107-00-6	2452	1%	4.50
36	ethylamine	75-04-7	1036 & 2270	1%	4.50
37	ethylbenzene	100-41-4	1175	1%	7000.00
38	ethylene	74-85-1	1038 & 1962	1%	4.50
39	gasoline (motor fuel)	86290-81-5	1203	1%	150.00
40	hydrogen	1333-74-0	1049	1%	4.50
41	hydrogen peroxide	7722-84-1	2015	52%	3.40
42	isobutane	75-28-5	1969	1%	4.50
43	isobutylene (2-methylpropene)	115-11-7	1055	1%	4.50
44	isopentane (2-methylbutane)	78-78-4	1265	1%	4.50
45	isoprene	78-79-5	1218	1%	4.50
46	isopropylamine	75-31-0	1221	1%	4.50
47	liquefied natural gas	8006-14-2	1972	1%	4.50
48	methane	74-82-8	1971 & 1972	1%	4.50
49	methyl formate	107-31-3	1243	1%	4.50
50	2-methyl-1-butene	563-46-2	2459	1%	4.50
51	3-methyl-1-butene	563-45-1	2561	1%	4.50
52	methylacetylene (propyne)	74-99-7	1060	1%	4.50
53	methylamine	74-89-5	1061	1%	4.50
54	naphtha	8030-30-6	1268	1%	50.00
55	1,3-pentadiene	504-60-9	no number	1%	4.50
56	n-pentane (pentane)	109-66-0	1265	1%	4.50
57	cis-2-pentene (beta-cis-amylene)	627-20-3	no number	1%	4.50
58	trans-2-pentene (trans-beta-amylene)	646-04-8	no number	1%	4.50
59	1-pentene	109-67-1	1108	1%	4.50
60	propadiene	463-49-0	2200	1%	4.50
61	propane	74-98-6	1978	1%	4.50
62	propylene	115-07-1	1077	1%	4.50
63	silane	7803-62-5	2203	1%	4.50
64	sodium chlorate	7775-09-9	1495	10%	10.00
65	tetrafluoroethylene	116-14-3	1081	1%	4.50
66	tetramethylsilane	75-76-3	2749	1%	4.50

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
67	toluene	108-88-3	1294	1%	2500.00
68	trichlorosilane	10025-78-2	1295	1%	4.50
69	trifluorochloroethylene (chlorotrifluoroethylene)	79-38-9	1082	1%	4.50
70	trimethylamine	75-50-3	1083 & 1297	1%	4.50
71	vinyl chloride	75-01-4	1086	1%	4.50
72	vinyl ethyl ether (ethyl vinyl ether)	109-92-2	1302	1%	4.50
73	vinyl fluoride	75-02-5	1860	1%	4.50
74	vinyl methyl ether	107-25-5	1087	1%	4.50
75	vinylidene chloride	75-35-4	1303	1%	4.50
76	xylenes	1330-20-7	1307	1%	8000.00

(Schedule 1 - Part 2)
Other Hazardous Substances

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
1	acrolein	107-02-8	1092	10%	2.27
2	acrylonitrile	107-13-1	1093	10%	9.10
3	acryloyl chloride (acrylyl chloride)	814-68-6	no number	10%	2.27
4	allyl alcohol	107-18-6	1098	10%	6.80
5	allyl chloride	107-05-1	1100	10%	9.10
6	allylamine	107-11-9	2334	10%	4.50
7	ammonia, anhydrous	7664-41-7	1005	10%	4.50
8	ammonia solution	7664-41-7	2073 & 2672	20%	9.10
9	arsenic trichloride (arsenous trichloride)	7784-34-1	1560	10%	6.80
10	arsine	7784-42-1	2188	1%	0.45
11	bis(chloromethyl) ether [dichlorodimethyl ether]	542-88-1	2249	1%	0.45
12	boron trichloride	10294-34-5	1741	10%	2.27
13	boron trifluoride	7637-07-2	1008	10%	2.27
14	boron trifluoride dimethyl etherate	353-42-4	2965	10%	6.80
15	bromine	7726-95-6	1744	10%	4.50
16	carbon disulphide	75-15-0	1131	10%	9.10
17	carbon monoxide	630-08-0	1016	10%	6.80
18	chlorine	7782-50-5	1017	10%	1.13
19	chlorine dioxide	10049-04-4	no number	1%	0.45
20	chloroform (trichloromethane)	67-66-3	1888	10%	9.10
21	chloromethyl methyl ether (methyl chloromethyl ether)	107-30-2	1239	10%	2.27
22	chloropicrin (trichloronitromethane)	76-06-2	1580	10%	2.27
23	chlorosulphonic acid	7790-94-5	1754	10%	2.27
24	crotonaldehyde	4170-30-3	1143	10%	9.10
25	cyanogen bromide	506-68-3	1889	10%	4.50
26	cyanogen chloride	506-77-4	1589	10%	4.50
27	cyclohexylamine	108-91-8	2357	10%	6.80
28	diborane	19287-45-7	1911	10%	1.13
29	1,2-dichloroethane (ethylene dichloride)	107-06-2	1184	10%	6.80
30	dimethyldichlorosilane (dichlorodimethylsilane)	75-78-5	1162	10%	2.27
31	1,1-dimethylhydrazine	57-14-7	1163	10%	6.80
32	epichlorohydrin	106-89-8	2023	10%	9.10

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
33	ethylene chlorohydrin (2-chloroethanol)	107-07-3	1135	10%	4.50
34	ethylene oxide	75-21-8	1040	10%	4.50
35	ethylenediamine	107-15-3	1604	10%	9.10
36	ethyleneimine	151-56-4	1185	10%	4.50
37	fluorine	7782-41-4	1045	1%	0.45
38	formaldehyde, solution	50-00-0	1198 & 2209	10%	6.80
39	furan	110-00-9	2389	10%	2.27
40	hydrazine	302-01-2	2029	10%	6.80
41	hydrochloric acid	7647-01-0	1789	30%	6.80
42	hydrofluoric acid	7664-39-3	1790	50%	0.45
43	hydrogen bromide (hydrobromic acid)	10035-10-6	1048 & 1788	10%	1.13
44	hydrogen chloride, anhydrous	7647-01-0	2186 & 1050	10%	2.27
45	hydrogen cyanide (hydrocyanic acid)	74-90-8	1051 & 1613 & 1614	10%	1.13
46	hydrogen fluoride, anhydrous	7664-39-3	1052	1%	0.45
47	hydrogen selenide	7783-07-5	2202	1%	0.22
48	hydrogen sulphide	7783-06-4	1053	10%	4.50
49	iron pentacarbonyl	13463-40-6	1994	10%	1.13
50	isobutyronitrile	78-82-0	2284	10%	9.10
51	isopropyl chloroformate	108-23-6	2407	10%	6.80
52	ketene	463-51-4	no number	1%	0.22
53	mercury	7439-97-6	2809	NA	1.00
54	methyl bromide	74-83-9	1062	10%	2.27
55	methyl chloride	74-87-3	1063	10%	4.50
56	methyl chloroformate	79-22-1	1238	10%	2.27
57	methyl iodide	74-88-4	2644	10%	4.50
58	methyl isocyanate	624-83-9	2480	10%	4.50
59	methyl mercaptan	74-93-1	1064	10%	4.50
60	methyl thiocyanate	556-64-9	no number	10%	9.10
61	methylacrylonitrile	126-98-7	3079	10%	4.50
62	methylhydrazine (monomethyl hydrazine)	60-34-4	1244	10%	6.80
63	methyltrichlorosilane	75-79-6	1250	10%	2.27
64	nickel carbonyl	13463-39-3	1259	1%	0.45

#	Substance (English)	CAS number	UN number	Concentration	Threshold quantity (tonnes)
65	nitric acid	7697-37-2	2031 & 2032	80%	6.80
66	nitric oxide	10102-43-9	1660	10%	4.50
67	nitrogen dioxide	10102-44-0	1067	10%	1.13
68	osmium tetroxide	20816-12-0	2471	1%	0.22
69	perchloromethyl mercaptan	594-42-3	1670	10%	4.50
70	perchloryl fluoride (trioxychlorofluoride)	7616-94-6	3083	10%	6.80
71	peroxyacetic acid (peracetic acid)	79-21-0	3107	10%	4.50
72	phenol	108-95-2	1671 & 2312 & 2821	10%	9.10
73	phosgene	75-44-5	1076	1%	0.22
74	phosphine	7803-51-2	2199	10%	2.27
75	phosphorus oxychloride	10025-87-3	1810	10%	2.27
76	phosphorus trichloride	7719-12-2	1809	10%	6.80
77	phosphorus, white	7723-14-0	2447	NA	1.00
78	piperidine	110-89-4	2401	10%	6.80
79	propionitrile	107-12-0	2404	10%	4.50
80	n-propyl chloroformate (propyl chloroformate)	109-61-5	2740	10%	6.80
81	propylene oxide	75-56-9	1280	10%	4.50
82	propyleneimine	75-55-8	1921	10%	4.50
83	stibine	7803-52-3	2676	10%	2.27
84	sulphur dioxide	7446-09-5	1079	10%	2.27
85	sulphur tetrafluoride	7783-60-0	2418	10%	1.13
86	sulphur trioxide	7446-11-9	1829	10%	4.50
87	sulphuric acid, fuming (oleum)	8014-95-7	1831	NA	4.50
88	tetraethyl lead	78-00-2	1649	10%	2.27
89	tetramethyl lead	75-74-1	no number	10%	4.50
90	tetranitromethane	509-14-8	1510	10%	4.50
91	thionyl chloride	7719-09-7	1836	10%	6.80
92	titanium tetrachloride	7550-45-0	1838	10%	1.13
93	toluene diisocyanate	26471-62-5	2078	10%	4.50
94	toluene-2,4-diisocyanate	584-84-9	2078	10%	4.50
95	toluene-2,6-diisocyanate	91-08-7	2078	10%	4.50
96	trans-crotonaldehyde	123-73-9	1143	10%	9.10
97	trimethylchlorosilane (chlorotrimethylsilane)	75-77-4	1298	10%	4.50
98	vinyl acetate	108-05-4	1301	10%	6.80

APPENDIX 5

CALCULATION OF SUBSTANCE AMOUNT

CALCULATION OF SUBSTANCE AMOUNT

The threshold quantity for each regulated substance is listed in Appendix 4 of these Implementation Guidelines. You should determine whether the maximum quantity of each substance used or stored at the place is greater than the threshold quantity listed. If it is, you must comply with the *Environmental Emergency Regulations* for that substance.

Quantity in a container

To determine if you have the threshold quantity of a regulated substance in a container involved in a single process, you need to consider the maximum quantity in that container at any one time. Base your decision on the actual maximum quantity that you may have in the container. Your maximum quantity may be more than your normal operating maximum quantity. For example, if you may use a container for extra storage, the maximum quantity should be based on the quantity that might be stored.

"At any time during a calendar year" means you need to consider the largest quantity that you ever have in the container. If you fill a tank with 20 tonnes and immediately begin using the substance and depleting the contents, your maximum is 20 tonnes.

If you fill the container four times a year, your maximum is still 20 tonnes. Throughput is not considered, because the Regulations are concerned about the maximum quantity you could release in a single event.

Quantity of a substance in a mixture

Other hazardous substances

If you have hazardous substances listed in Part 2 of Appendix 4 within a mixture and their concentration is less than the listed concentration, you do not need to consider them at all.

If one of these substances is in a mixture at a concentration above its listed concentration, you must determine the weight of the substance in the solution and use that to calculate the quantity present. If that quantity is greater than the threshold, the process is covered. For example, aqueous ammonia is covered at concentrations above 20 percent, with a threshold quantity of 9.1 tonnes. If the solution is 25 percent ammonia, you would need 36.4 tonnes of the solution to meet the threshold quantity; if the solution is 44 percent ammonia, you would need 20.7 tonnes to meet the threshold quantity (quantity of mixture x percentage of regulated substance = quantity of regulated substance).

If the concentration is less than the concentration identified in the list, you need not consider the quantity in your threshold determination. If the concentration in a mixture is above the listed concentration, you must calculate the weight of the regulated substance in the mixture and use that weight to determine whether a threshold quantity is present. However, if you can measure or estimate (and document) the partiai pressure of the regulated substance in the mixture to be less than 10 mmHg, you do not need to consider the mixture.

If the substance, at or above the specified concentration, is stored or used in amounts equal to or exceeding the threshold quantity and is held in a container with a capacity greater than that of the listed quantity, the preparation and implementation of an environmental emergency plan are required.

Flammables

Flammable mixtures are subject to these requirements only if there is a regulated substance in the mixture above 1 percent and the entire mixture meets the *Transportation of Dangerous Goods Act* criteria for flash point and boiling point. If the mixture meets both of these criteria, you must use the weight of the entire mixture (not just the listed substance) to determine if you exceed the threshold quantity. Substances meeting the *Transportation of Dangerous Goods Act* criteria will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or are easily dispersed in air and will burn readily. This includes any liquid or gaseous material that is liquid while under pressure and that has a flash point below 23°C and a boiling point below 35°C. These are materials that, if released in an emergency, will pose a significant risk to human life, health or the environment.

If the above criteria are met, an environmental emergency plan is required under the *Environmental Emergency Regulations*. However, it should be noted that for complex flammable mixtures, Environment Canada requires only the identification of the mixture's main regulated component (e.g., a mixture containing substance x) when filing the first notice identifying the substance and place.

APPENDIX 6

NOTIFICATION AND REPORTING OF ENVIRONMENTAL EMERGENCIES

TRANSPORTATION OF DANGEROUS GOODS ACT
ACCIDENTAL RELEASE REPORTING REQUIREMENTS

Primary Classification	Amount	Emission Level
Class 1	Any quantity that could pose a danger to public safety or 50 kilograms	
Class 2	Any quantity that could pose a danger to public safety or any sustained release of 10 minutes or more	
Class 3	At least 200 litres	
Class 4	At least 25 kilograms	
Class 5.1	At least 50 kilograms or 50 litres	
Class 5.2	At least 1 kilogram or 1 litre	
Class 6.1	At least 5 kilograms or 5 litres	
Class 6.2	Any quantity that could pose a danger to public safety or 1 kilogram or 1 litre	
Class 7	Any quantity that could pose a danger to public safety	An emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclear Substances Regulations"
Class 8	At least 5 kilograms or 5 litres	
Class 9	At least 25 kilograms or 25 litres	

Transportation of Dangerous Goods Act: Clear Language Regulations - Part 8

CANADIAN ENVIRONMENTAL PROTECTION ACT 1999 - SECTION 201 VERBAL AND WRITTEN REPORT INFORMATION REQUIREMENTS

For purposes of section 9 of the *Environmental Emergency Regulations*, environmental emergencies:

- a verbal notification is to be made by telephone as soon as possible in the circumstances to the authorities named in column 2 of Schedule 6 of the Regulations and Appendix 6 of these Guidelines.

- a written report should be made within 30 days to the relevant authorities named in column 3 of Schedule 6 of the Regulations and Appendix 6 of these Guidelines.

Verbal Notification:

The verbal report should include as much of the following information as is known at the time of the report:

a) the reporting person's name and telephone number at which the person can be immediately contacted;
b) the name of the person who owns or has the charge, management or control of the substance immediately before the environmental emergency;
c) the date and time of the release;
d) the location of the release;
e) the name/UN number of the substance released;
f) the estimated quantity of the substance released;
g) the means of containment (from which the substance was released) and a description of its condition;
h) the number of deaths and injuries resulting from the environmental emergency;
i) the surrounding area/environment affected and potential impact of the release (mobility of release and weather or geographic conditions at the site);
j) a brief description of the circumstances leading to the release;
k) the cause of the release (if known);
l) details of the actions taken or further actions contemplated (to contain, recover, clean up and dispose of the substance involved);
m) the names of agencies notified or on-scene; and
n) other pertinent information.

Written Report:

The following information should be included in the written report:

a) the name and address of the person who owns or has the charge, management or control of the substance involved in the environmental emergency and the telephone number, including the area code, at which the person may be contacted;
b) the date, time and exact location of the release;
c) the name/UN number of the substance released;
d) the composition of the substance released showing, with respect to each substance involved, its concentration and total weight;
e) the estimated quantity of the substance released and the total quantity of substance in the means of containment before the release;
f) the duration of the release of the substance and its release rate;
g) the means of containment (from which the substance was released) and a description of its condition;
h) the number of deaths and injuries resulting from the environmental emergency;
i) the surrounding area/environment affected and potential impact of release (mobility of release, weather or geographic conditions at the site, long-term environmental impacts);
j) a complete sequence of events before and after the environmental emergency (including the cause of the release, if known);
k) the names of agencies notified or on-scene at the time of the release;
l) all measures taken pursuant to CEPA 1999 paragraph 201(1)(b) and (c) (regarding protection of the environment and public safety and notification to any member of the public adversely affected by the environmental emergency); and
m) all measures to be taken to prevent similar releases.

NOTIFICATION AND REPORTING OF ENVIRONMENTAL EMERGENCIES

Column 1 Province	Column 2 Verbal Notification 24-hour telephone line	Column 3 Written Report Designated person
Ontario	**(416) 346-1971** (this telephone number is forwarded to the Ontario Ministry of the Environment Spills Action Centre)	Director, Environmental Protection Ontario Region Environment Canada 4905 Dufferin Street Downsview, ON M3H 5T4
Québec	**(866) 283-2333**	Director, Environmental Protection Québec Region Environment Canada 4th Floor, 105 McGill St. Montréal, QC H2Y 2E7
Nova Scotia	**(902) 426-6030** (within Halifax area) **(800) 565-1633** (outside Halifax area)	Director, Environmental Protection Atlantic Region Environment Canada 16th Floor, Queen Square 45 Alderney Drive Dartmouth, NS B2Y 2N6
New Brunswick	**(800) 565-1633**	Director, Environmental Protection Atlantic Region Environment Canada 16th Floor, Queen Square 45 Alderney Drive Dartmouth, NS B2Y 2N6
Manitoba	**(204) 944-4888** (call collect outside Winnipeg)	Director, Environmental Protection Prairie and Northern Region Environment Canada Twin Atria No. 2 210 - 4999 98th Ave. Edmonton, AB T6B 2X3

Column 1 Province	Column 2 Verbal Notification 24-hour telephone line	Column 3 Written Report Designated person
British Columbia	**(800) 663-3456**	Director, Environmental Protection Pacific and Yukon Region Environment Canada #201 - 401 Burrard Vancouver, BC V6C 3S5
Prince Edward Island	**(800) 565-1633**	Director, Environmental Protection Atlantic Region Environment Canada 16th Floor, Queen Square 45 Alderney Drive Dartmouth, NS B2Y 2N6
Saskatchewan	**(800) 667-7525**	Director, Enforcement and Compliance Branch Saskatchewan Environment 63-12th Street East, Box 3003 Prince Albert, SK S6V 1B3
Alberta	**(780) 422-4505** **(800) 222-6514** (accessible within province)	Director, Enforcement and Monitoring Branch Alberta Environment 11th Floor, Oxbridge Place 9820 106th Street Edmonton, AB T5K 2J6
Newfoundland and Labrador	**(709) 772-2083** **(800) 563-9089** (accessible within province)	Director, Environmental Protection Atlantic Region Environment Canada 16th Floor, Queen Square 45 Alderney Drive Dartmouth, NS B2Y 2N6
Yukon Territory	**(867) 667-7244**	Director, Environmental Protection Pacific and Yukon Region Environment Canada #201 - 401 Burrard Vancouver, BC V6C 3S5

Column 1 Province	Column 2 Verbal Notification 24-hour telephone line	Column 3 Written Report Designated person
Northwest Territories	**(867) 920-8130**	Director, Environmental Protection Prairie and Northern Region Environment Canada Twin Atria No. 2 210 - 4999 98th Ave. Edmonton, AB T6B 2X3
Nunavut	**(867) 920-8130**	Director, Environmental Protection Prairie and Northern Region Environment Canada Twin Atria No. 2 210 - 4999 98th Ave. Edmonton, AB T6B 2X3

These Implementation Guidelines are publicly available on the CEPA Registry at www.ec.gc.ca/CEPARegistry/

The Environmental Emergency Regulations on-line notification system can be accessed from www.cepae2.ec.gc.ca